MDOT 2012 ITS PROJECT SPECIFICATIONS

Designers Presentation

Disclaimer: This document is developed to summarize changes to the 2012 special provisions. This is not an official MDOT document and its contents should not be referenced on specific ITS Contracts.

OUTLINE

- Reason for SP changes
- Changed approach of Project Overview, BM&M, and System Integration SPs
- Significant changes to existing SPs
- Significant changes to design approach
- New Special Provisions introduced

REASONS FOR SP CHANGES

- Address common variances and known issues
- Simplifying payment approach
- Improving standards for electrical/bonding/grounding items
- Upgrade functional requirement to new standards

Project overview, Basic Methods and System Integration and Testing

- **Project Overview**
  - Specific project requirements
  - Not a pay item
- **Basic Methods and Materials for ITS work**
  - Set of rules and standards on submittals, testing, training and Regulatory Agencies
  - Not a pay item
- **System Integration and Testing**
  - Acceptance Test Procedures (ATP requirements)
  - Lump Sum pay item

Significant changes to existing SP

- Fiber Optic
- ITS Cabinet
- Unlicensed Wireless Radios
- Spun Concrete Pole and drilled shaft foundation
- Dynamic Message Sign, install and integrate
- Environmental Sensor Station (ESS)

Fiber Optic

- **Splicing Requirements**
  - All splicing conducted inside the ITS Cabinet
  - Introducing Fiber Optic Splice cabinet
  - Introducing Rack Interface Center
- **Pay items**
  - Fiber optic Pay items grouped in assemblies
  - Fiber optic Fusion Splicing paid for under the FO cable pay item

ITS Cabinet

- **Electrical Requirements**
  - Panel Distribution Unit, Surface Mounted
  - Circuit Breakers sizes
- **Pay items**
  - ITS Cabinet no longer includes, UPS, MFES, or DVE
  - Cabinet Monitoring System still included the cost

Unlicensed Wireless Radios

- **Testing requirements**
  - Actual field testing **prior** to construction
    - Throughput
    - Received Signal Level
    - Link Budget Calculations
  - **Pay Items**
    - No Change

Spun Concrete Pole and Drilled Shaft Foundation

- **Pole design**
  - Michigan PE Stamp Required
  - Drilled shaft foundation design to be provided by designer
- **Construction detail change**
  - 20 Ft foundation instead of 15 ft
  - Maximum CCTV height 85 ft
- **Pay Items**
  - Added pay items for foundation depth

Dynamic Message Sign

- **DMS Procurement**
  - MDOT will procure all signs
  - Contractor to install and integrate
- **DMS Sign, Support Structure and foundation**
  - Submit Drilled Shaft Installation Plan prior to construction
  - **Pay Items**
  - DMS Sign, Install and Integrate
  - DMS Sign, Support Structure and foundation (Separate SP)

Environmental Sensor Station (ESS)

- **Special Provisions**
  - Separate SP for each sensor
  - Separate SP for RPU
- **RWIS Central Software**
  - RWIS Central Software separate from ATMS/Delcan
  - Contractor not responsible for head-end software integration
- **ESS Tower**
  - Drilled shaft foundation for the ESS tower to be provided by designer

Changes to design requirements

- **Unlicensed Wireless Links**
  - Wireless Design
- **Spun concrete pole**
  - Drilled Shaft foundation design
- **Communication Tower**
  - Grounding Detail Design
- **ESS Tower**
  - Drilled Shaft Foundation Design
- **Networking**
  - IP Scheme development

NEW SP introduced

- Grounding , bonding, lightning protection and surge protection for ITS Equipment
- Site grounding system for communication towers, communication shelters and surrounding compound
- Uninterruptible Power Supply for ITS
- Managed Field Ethernet Switch
- Digital Video Encoder

SP Request Procedures

- Fill in MDOT SP request form
- Send form to MDOT Project Manager
- MDOT PM submits the request to Program Office.